As is shown in FIG. 3, an isolation structure 306 such as shallow trench isolation is formed in the single silicon layer 304 to define active areas. The isolation structure 306 defines the single silicon crystal layer into one or more single crystal lines to serve as an input resistor. The single crystal line 308 has a lower dosage and is used as a resistor having higher resistance. In addition, the width of the single crystal line 308 determines the resistance of the input resistor; that is, the narrower the width of the single crystal, the higher resistance the input resistor has.

Please replace the paragraph beginning on page 7, line 5, with the following paragraph:

Moreover, the single crystal Si-sided junction diode can be a MOS transistor 400 as illustrated in FIG. 4. The MOS transistor 400 includes a gate 402 and a source/drain region 404 is fabricated in the single crystal Si layer 304 above the buried insulating material layer 302 as well, wherein the gate 402 and one of the source/drain region 404 electrically connects to the node 318 by wiring lines. A P/N junction is formed due to opposite conductivity of the dopants in the source/drain region 404 and the single crystal Si layer 304. Since the insulating material layer 302 is formed under the source/drain region 404, the lateral junction is formed as the structure shown in FIG. 3. Therefore, the MOS transistor can be used as a single crystal Si-sided junction diode.

In The Claims

Please substitute the following clean copy text for the pending claims of the same number.

Subt B'

1. (Once Amended) An ESD protection structure having a single crystal Si-sided diode used to protect an internal circuit, the ESD protection structure electrically connected between an